



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

644.4102-F
Job Sheet 175550



Part No: 644.4102-F

Job Qty: 10 ea

Part Name: Pivot Step Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/6/18

Job Tracking No:

Due Date: 5/9/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 644.4100 Rev F2 IPP Rev B 18.04.05 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Start up Operation	10 Ea		5/8/18	0.00	0.00	Start Up Small Fab-4		JUN 11 2018
110	Small Fab	10 pcs		5/9/18	0.00	10.00	Small Fab-8		
120	QC	10 pcs		5/9/18	0.00	0.00	QC5		
130	Packaging	10 pcs		5/9/18	0.00	0.00	Packaging3		
140	QC21-FG	10 Ea		5/9/18	0.00	0.00	QC21		JUN 12 2018

Part Op 110 - ASSEMBLE BRACKETS AS PER DWG

Descriptions:

DAG 21 9-29

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
644.4104	FWD Bracket Assembly	10 Ea (1 ea)	100-Start up Operation	5079867
644.4114	Washer, Pivot	10 Ea (1 ea)	100-Start up Operation	5068258
644.4119	Spacer, Fwd Stop	20 Ea (2 ea)	100-Start up Operation	5068071
644.4121	Washer, Nylon	20 Ea (2 ea)	100-Start up Operation	5060869
644.4122	EC145 Fwd Crosstube Bushings	10 Ea (1 ea)	100-Start up Operation	5067522
644.4123	EC145 Fwd Crosstube Bushing	10 Ea (1 ea)	100-Start up Operation	5067672
644.4124	Washer, Pivot	10 Ea (1 ea)	100-Start up Operation	5069228
AN310-5	Nut	10 Ea (1 ea)	100-Start up Operation	5066246
AN5-45	Bolt	10 Ea (1 ea)	100-Start up Operation	FMI37744
AN5-50	Bolt	10 Ea (1 ea)	100-Start up Operation	FMI36484 x 6 50702 94x4
MS21044N5	Nut	10 Ea (1 ea)	100-Start up Operation	5057526
MS24665-210	Cotter Pin	10 Ea (1 ea)	100-Start up Operation	FMI36349-1
NAS1149C0563R	Washer	50 Ea (5 ea)	100-Start up Operation	507277 x 6 FMI 38809- 2x44

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Start up Operation	644.4104	10	0	0
	644.4114	10	0	0
	644.4119	20	0	0
	644.4121	20	1	0
	644.4122	10	1	0
	644.4123	10	0	0
	644.4124	10	0	0
	AN310-5	10	49	0
	AN5-45	10	15	0

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval _____	
Description Work Order Deviation			Disposition		
			Completed By _____		
			d / Supervisor _____ il Verification _____		
			Coordinator _____ proval _____		
			d Wrong _____ Dimensions _____ der tolerance _____ rrect _____ /Missing _____ ed _____		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		
			Date: 08/11/18 Misread ☐ Turning Sequence ☐		

Part: 644.4102
 Job No: 175550
 Serial No/Batch: S079816
 Revision: F2
 Inspector:
 Exp Date:
 Instructions:



Container No: S079816
 DART AEROSPACE

1270 Aberdeen Street
 Haverhill, MA 01830
 TEL: 1 813 832-5200
 Email: sales@dartaero.com
 www.dartaerospace.com

AN5-50	10	6	0
MS21044N5	10	115	0
MS24665-210	10	81	0
NAS1149C0563R	50	176	0

Part Specifications

Specifications could not be found.

Plex 4/6/18 11:01 AM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

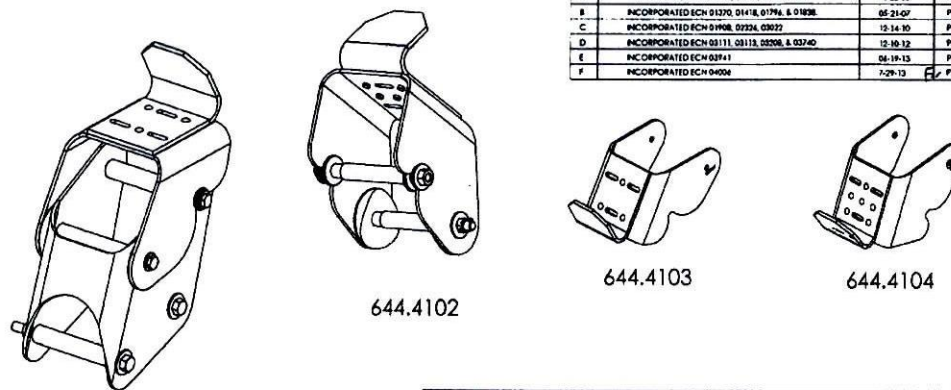
QA Closed: _____ Date: _____

Work Order update only ☐

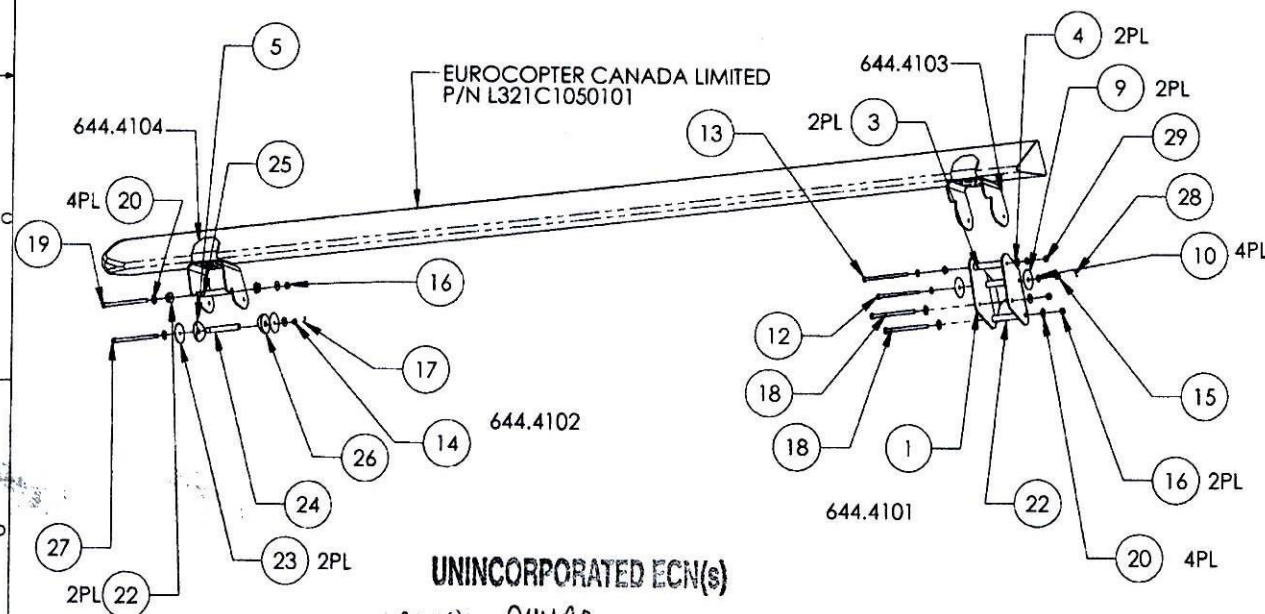
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

NOTES:

1. IDENTIFY ALL PARTS IN ACCORDANCE WITH MPP-120
2. MATERIAL: 2024-T3 ALUMINUM
3. MATERIAL: 6061-T6 ALUMINUM
4. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III CLASS 2, COLOR BLACK; PRETREAT PR-148 ADHESION PROMOTER, PRIME WITH DESOTO 515X349 IAW BMS 10-79 TYPE III CLASS A GRADE A, POLYURETHANE PAINT CARDINAL 6409-RD03-S WITH CATALYST 340HP.
5. MATERIAL: MDS-FILLED NYLON 6/6 SHEET, CUT OD CIRCLE USING 2" GASKET PUNCH, CUT ID HOLE USING 1/4" GASKET PUNCH
6. MATERIAL: MDS-FILLED NYLON 6/6 SHEET, CUT OD CIRCLE USING 2" GASKET PUNCH, CUT ID HOLE USING 5/16" GASKET PUNCH
7. DIMENSION VALUE HAS FINISH COATING OF 6-10 MIL (.006-.010) TAKEN INTO CONSIDERATION
8. ADD ADDITIONAL WASHER UNDERNEATH CASTLE NUTS IF NECESSARY.
9. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III CLASS 2, COLOR BLACK.



644,4101



UNINCORPORATED ECN(S)

04286, 04489

REVIEWS			
REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECH 01310, 01322, 01342, & 01357	11-29-05	S. JOSEPH
B	INCORPORATED ECH 01370, 01418, 01796, & 01838	05-21-07	P. BRAYO
C	INCORPORATED ECH 01908, 02324, 03027	12-14-10	P. BRAYO
D	INCORPORATED ECH 03111, 03113, 03208, & 03740	12-10-12	P. BRAYO
E	INCORPORATED ECH 03941	06-18-13	P. BRAYO
F	INCORPORATED ECH 04008	2-29-13	P. BRAYO

			1	29	601.3273	LOCKNUT FULL	MS21044N4		
			1	28	601.2640	COTTER PIN	MS24665-132		
			1	27	201.2328	BOLT, HEX	AN5-45		
			1	26	644.4124	WASHER, PIVOT	△△		
			1	25	644.4123	FWD CROSS-TUBE BUSHING	△△		
			1	24	644.4122	FWD CROSS-TUBE BUSHING	△△		
			2	23	644.4121	WASHER, NYLON	△△		
			1	22	644.4120	SPACER, CROSS-TUBE	△△		
			2	21	644.4119	SPACER, FWD STOP	△△		
			4	20	601.2110	WASHER, FLAT THICK	MS1149C 0303R		
			1	19	601.2250	BOLT, HEX	AN5-50		
			2	18	601.2249	BOLT, HEX	AN5-43A		
			1	17	601.3315	COTTER PIN	MS24665-210		
			1	2	16	601.3272	LOCKNUT FULL	MS21044N5	
			1	15	601.1435	NUT, HEX CASTLE FULL	AN310-4		
			1	14	601.3270	NUT, HEX CASTLE FULL	AN310-5		
			1	13	601.3407	BOLT, HEX	AN4-47A		
			1	12	601.2434	BOLT, HEX	AN4-45		
6	3			11	601.2326	RIVET, COUNTERSUNK	MS20426A05-B		
			4	10	601.0863	WASHER, THICK	MS1149C 0443R		
			2	9	644.4118	WASHER, NYLON	△△		
				8	644.4117	BRACKET, FWD PIVOT	△△		
				7	644.4116	BRACKET (SMALL), FWD	△△		
			1		6	644.4115	BRACKET (SMALL), AFT	△△	
			1		5	644.4114	WASHER, PIVOT	△△	
			2	4	644.4113	SPACER, STOP	△△		
			2	3	644.4112	SPACER	△△		
			1	2	644.4111	BRACKET, AFT PIVOT	△△		
			1	1	644.4110	BRACKET (LARGE), AFT	△△		
					644.4104	FWD BRACKET ASSY			
					644.4103	AFT BRACKET ASSY			
					644.4102	PIVOT STEP ASSY			
					644.4101	PIVOT STEP ASSY			
4104	4103	4102	4101	FWD #	PART #	DESCRIPTION	MATL	SPEC.	

QTY		PARTS LIST	
NEXT ASSY (S)		APICAL INDUSTRIES	
644.1800		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
		PIVOT STEP ASSY	
ORIGINAL DATE 06-01-05 DRAWN BY KRECHER D. PARONET J. JOSEPH DRAWING APPROVAL J. JOSEPH 06-27-05 CONTRACT NO.		SET 1 CASE COOK DWG. NO. 644.4100 REV F B 07/M/6 SCALE: NONE SHEET 1 OF 16	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ± .010 2 PLACE DECIMALS ± .030 ANGLES ± .5°			

DQA: _____ Date: _____

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Description Work Order Deviation		Disposition		Completed By	
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OTHER :					



Dart Aerospace Ltd.
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Canada

Tel (613) 632-5200

Container View (Active) - Master Unit Containers

Master Unit No	Container No	Part No	Part Name	From Container	Current Location	Quantity
003793	S068250	644.4114	Washer, Pivot	S068243	CCK135	10
003793	S068071	644.4119	Spacer, Fwd Stop	S068070	CCK135	20
003793	S060869	644.4121	Washer, Nylon	S060860	CCK131	20
003793	S067522	644.4122	EC145 Fwd Crosstube Bushings	S067521	CCK131	10
003793	S067617	644.4123	EC145 Fwd Crosstube Bushing	S067616	CCK135	10
003793	S069228	644.4124	Washer, Pivot	S069210	CCK135	10
003793	S079758	AN310-5	Nut	S006246	ST331	10
003793	S079757	AN5-45	Bolt	FM137744	ST335	10
003793	FM136484	AN5-50	Bolt		ST335	6
003793	S079756	AN5-50	Bolt	S070294	ST335	4
003793	S079755	MS21044N5	Nut	S057526	ST302	10
003793	S079753	MS24665-210	Cotter Pin	FM136349-1	ST289	10
003793	S031277	NAS1149C0563R	Washer	fm131697-1	ST265	6
003793	S079752	NAS1149C0563R	Washer	FM138409-2	ST265	44

Note: Ad hoc query view of Part.dbo.Container where Container.Active = 1.

Plex 6/11/18 1:40 PM dart.quirion.sonia